

# Reprocessing

Alex Hu

# Requirements Summary



- Need to support 2X Routine production load
- Support updates of PGE software
- Support regeneration of DPRs
- Support data versioning in PDPS
- Reprocessing PRs are scheduled along with Routine PRs
- Independent throttling for Reprocessing DPRs

# Key Design Drivers

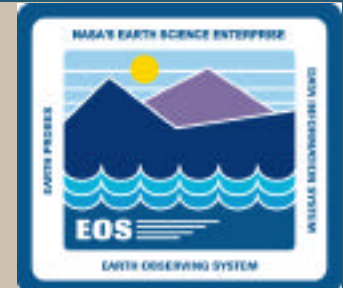


- Extension of ad-hoc reprocessing code
- Difference between regeneration of data and reprocessing
- Enforce use of most up to date data
- Ability to pick up broken chains where they left

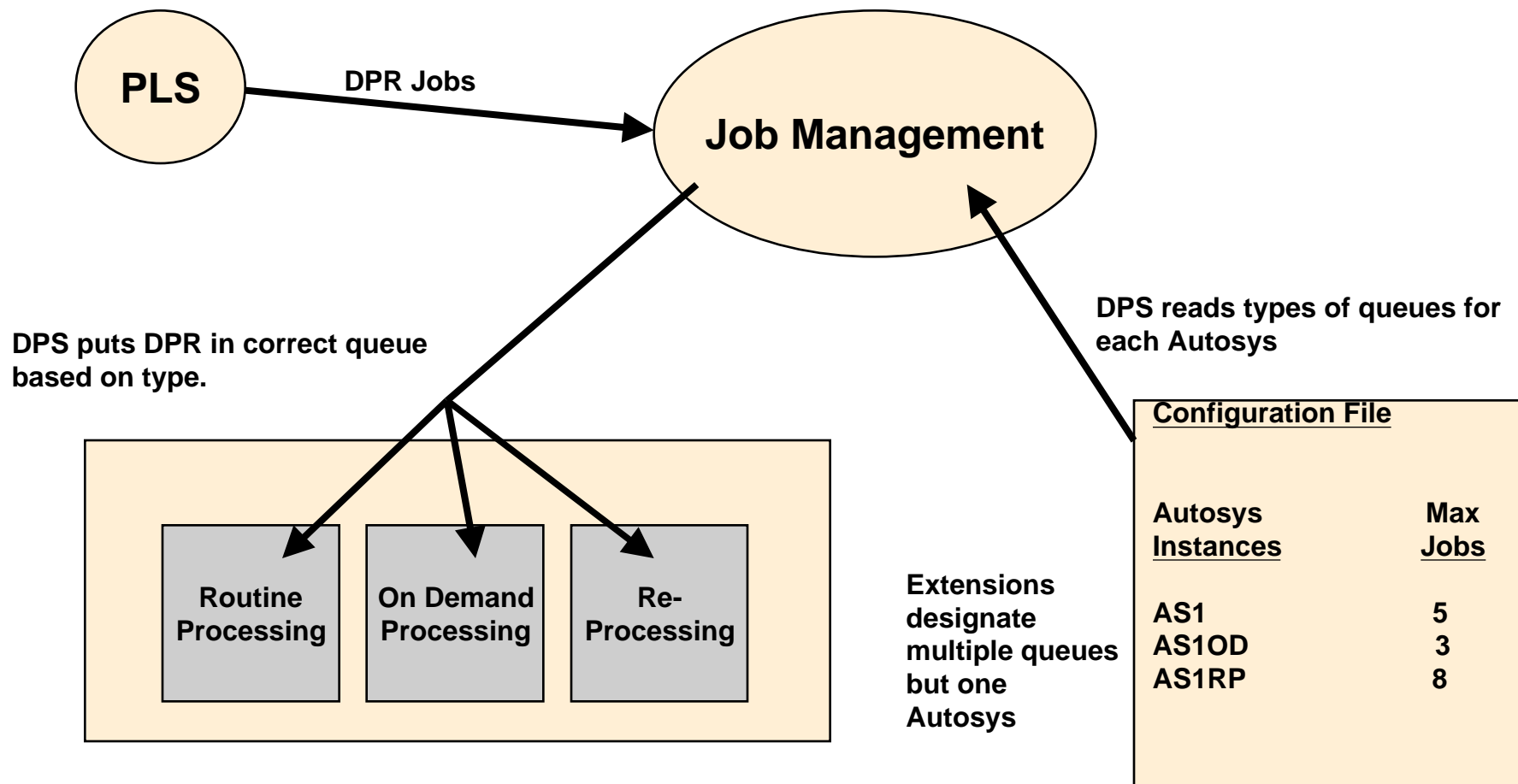
# New SW Components



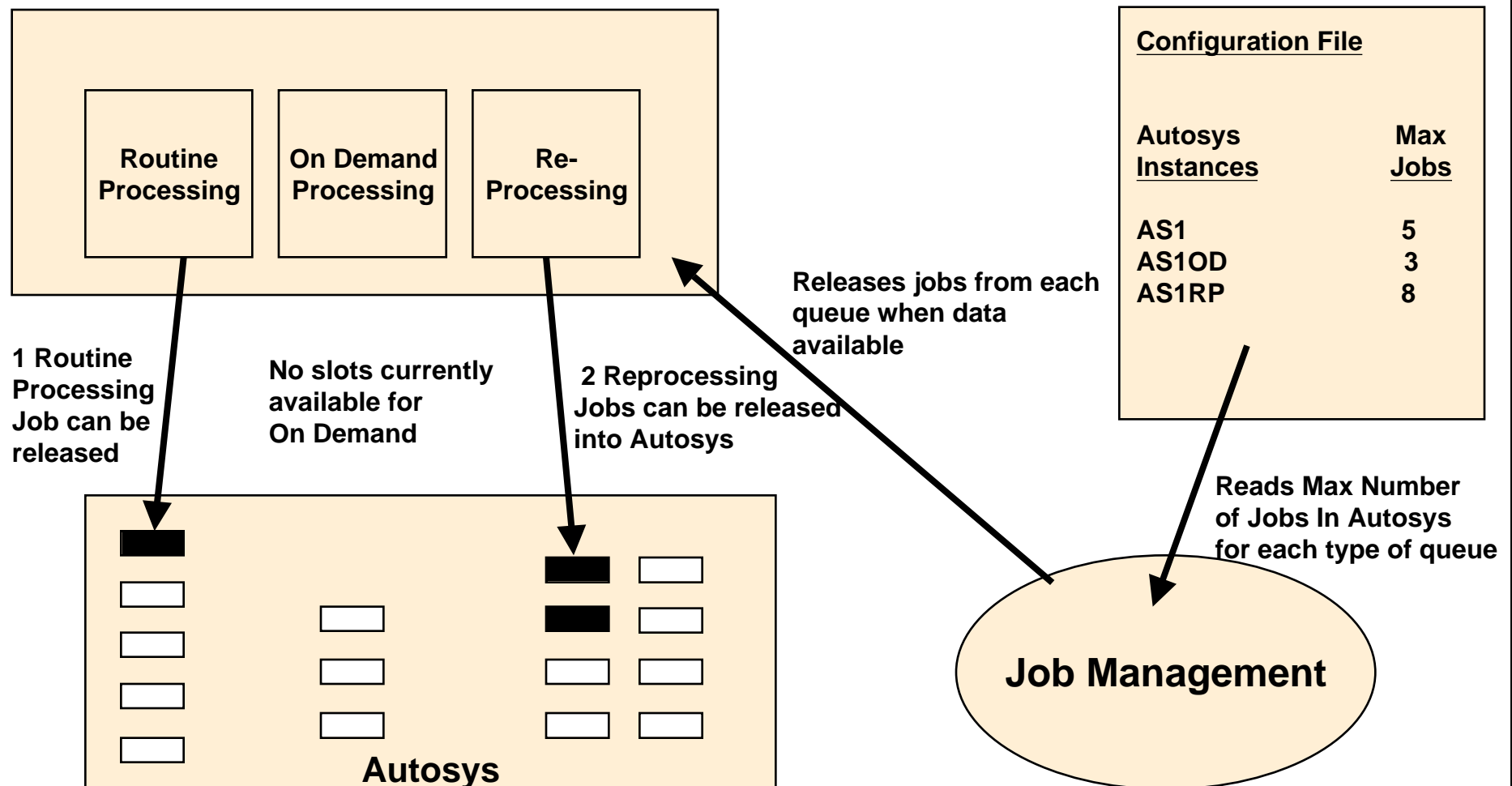
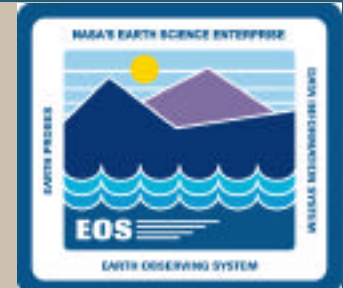
- Extension of existing capabilities in ad-hoc reprocessing
- Extension of independent throttling



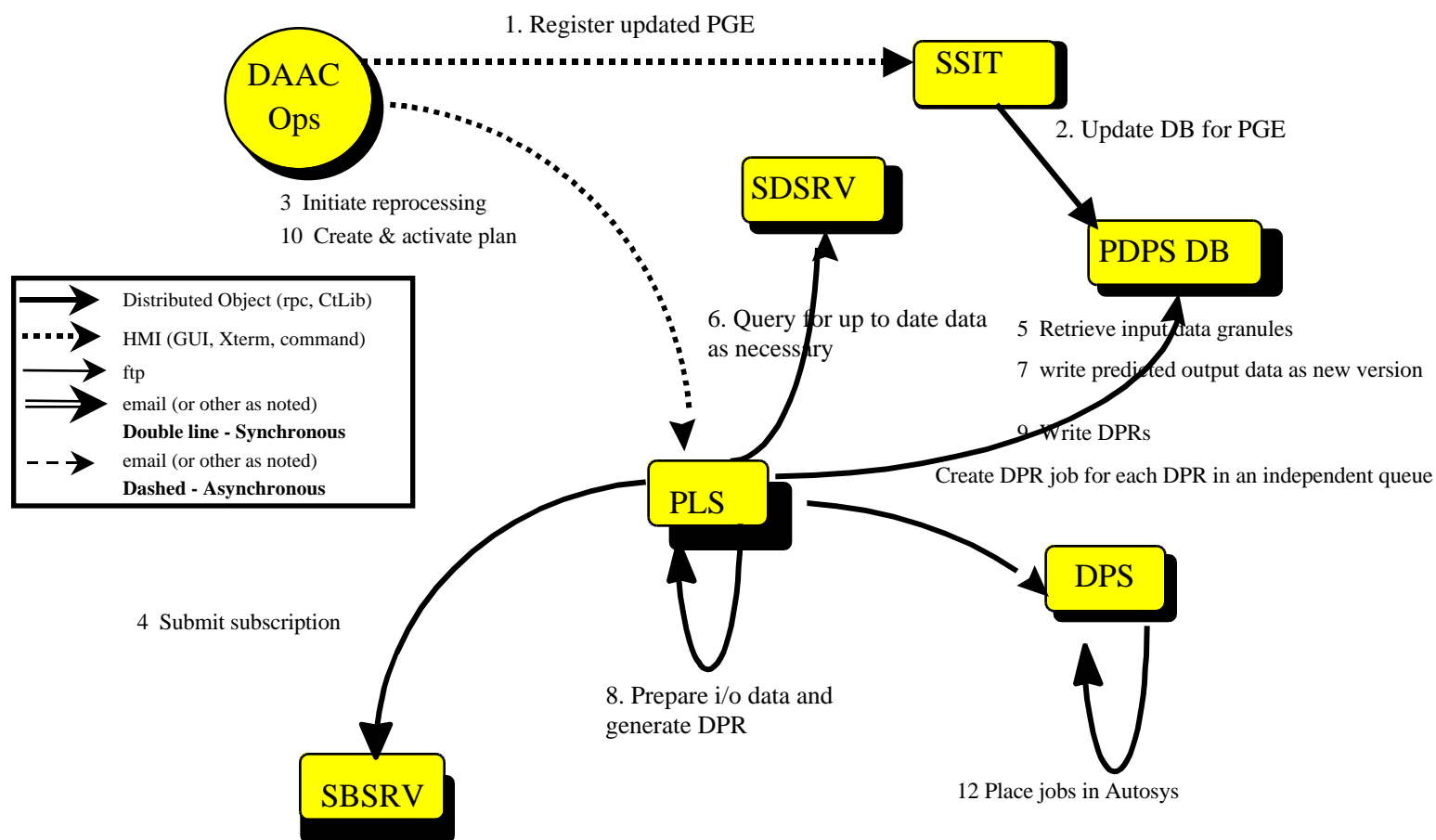
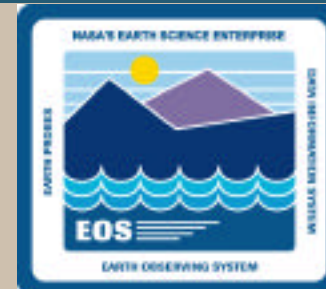
# DPS Queuing DPRs



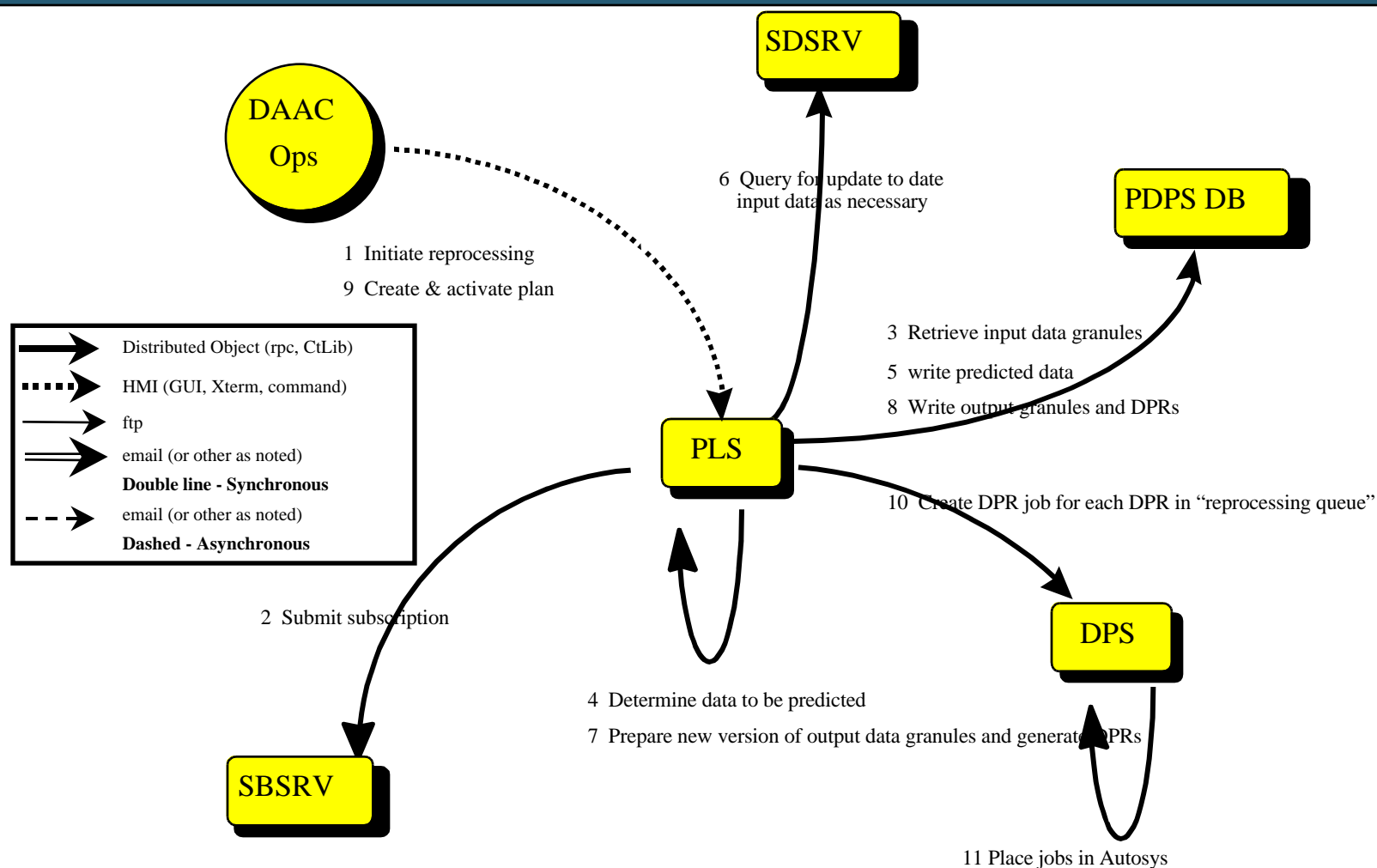
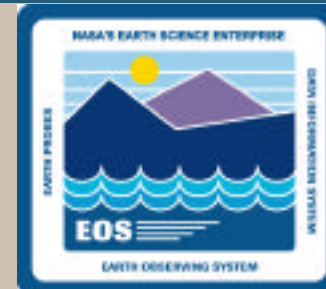
# DPS Releasing Jobs into Autosys



# Interaction Diagram Reprocessing



# Interaction Diagram (DPR regeneration)



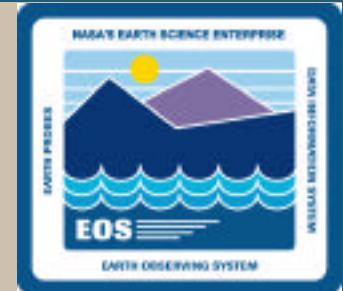


# End User Interaction



- User has the option to do reprocessing through Production Request Editor
- ~~Mark reprocessing DPRs through PRE gui~~  
functionality is covered by the new “Reprocessing” option
- Mark reprocessing DPRs through PRE gui

# End User Interaction



Production Request Editor

File Edit Help

Planning PR Edit PR List DPR View DPR List

PR Name:  Origination Date:   
(UTC)

PR Type:  Originator:

User Type:  Priority:

Satellite Name:  PGE ...

Instrument Name:  PGE Parameters...

PGE Name:  Metadata Checks...

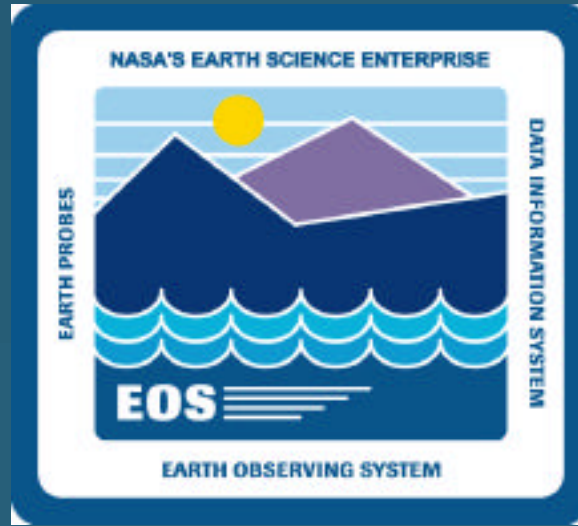
PGE Version:  Alternate Input Values..

Profile Id:

# DAAC Operational Impacts



- Normal planning will include reprocessing DPRs
- No need for regeneration of whole chains on intermediate failure



**Attached DPR**

**Cristina Bories**

# Requirements Summary



- Attached DPR supported by requirements in DAR tool, MSS, CLS and PLS subsystems.
- ODPRM accepts Attached DPR orders and collects parameters for the associated High Level On Demand request(s)
- ODPRM introduces Standing Orders
- ODPRM implements automatic expiration for Standing Orders.
- MSS supports order tracking and updates for Standing Orders .

# Key Design Drivers



- **User Interface**
  - Extends ODFRM with an additional product type that can be requested.
  - Can be started via DAR tool at DAR creation time, or subsequently, via ODFRM.
- Attached DPP is an extension of ASTER On Demand scenario
- Automated generation of On Demand orders as granules associated with the DAR arrive.
- High Level orders resulting of a DAR, are treated the same as On Demand High Level orders.
- Reuse of On Demand code
- Tight integration between JDT and ODFRM

# New/extended SW Components

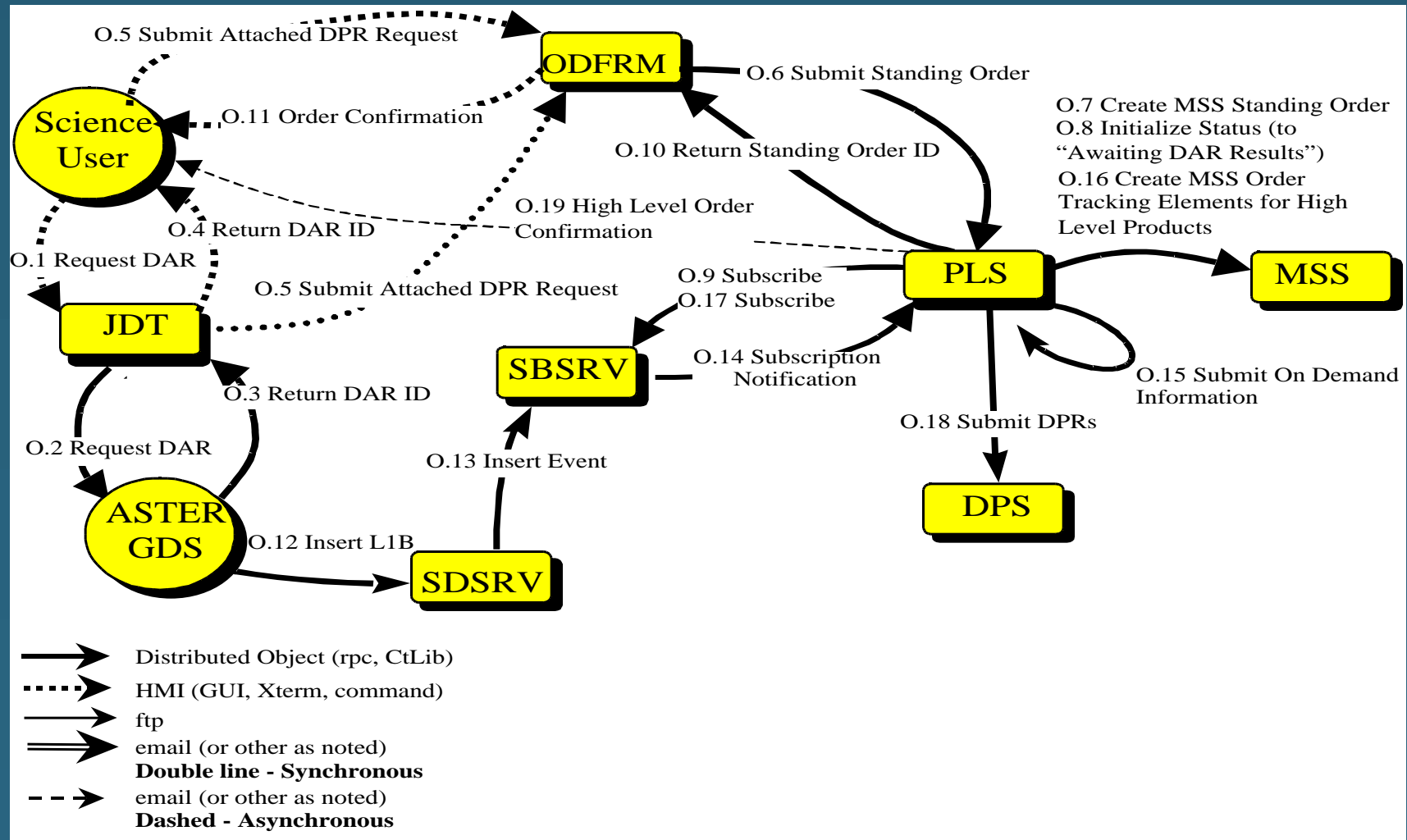
## EDC DAAC



- **DAR tool**
  - New IF to bring up ODFRM and pass DAR information
- **ODFRM**
  - Extends HTML interface to receive Attached DPR requests
- **ODPRM**
  - Creates Standing Orders
  - Associates arriving L1B granules to existing Standing Orders
  - Generates corresponding High Level orders and requests
  - Automatic expiration of Standing Orders
- **No new Hardware components**



# Attached DPR Interaction Diagram



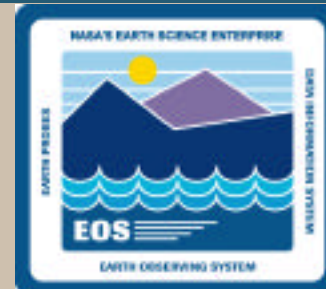


# End User Interaction



- Saves the user from waiting for DAR granules and then generating one by one the different On Demand requests
- DAR tool
  - Allows bringing up ODFRM from DAR tool.
- ODFRM
  - Extends HTML interface to receive Attached DPR requests.
- MSS
  - Allows operator to track/cancel standing order.

# ODFRM





Netscape: ASTER On-Demand Processing Requests

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Internet Lookup New&Cool

Bookmarks Netsite:  What's Related



## ASTER On-Demand Processing Requests

[Help](#)

**Welcome!** Thank you for your interest in ASTER science data products.

Use this form to order [on-demand](#) ASTER data products.

Begin by supplying the information below, then clicking "Continue".  
If email is not entered, it will use default email from the userprofile.

**User Information:**  
Please login or provide email address:

\* UserID:

\* Password:

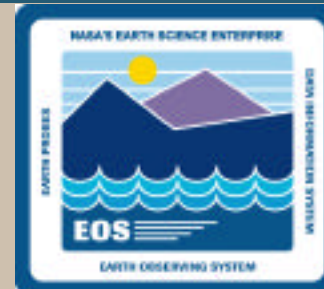
E-mail address:



Is this order attached to a DAR? ☐ Yes

\* = mandatory

Click  when you are ready to continue.

# ODFRM



**ASTER On-Demand Processing Requests**[Help](#)

---

### Select Products

Select the button for the product you want to order.  
Follow the hyperlinks for more information about each product.

<a href="#">AST_04</a>	Brightness Temperature at Sensor
<a href="#">AST_05</a>	Surface Emissivity
<a href="#">AST_08</a>	Surface Kinetic Temperature
<a href="#">AST_06V</a>	Decorrelation Stretch--VNIR
<a href="#">AST_06S</a>	Decorrelation Stretch--SWIR
<a href="#">AST_06T</a>	Decorrelation Stretch--TIR
<a href="#">AST_07</a>	Surface Reflectance--VNIR, SWIR
<a href="#">AST_09</a>	Surface Radiance--VNIR, SWIR
<a href="#">AST_09T</a>	Surface Radiance--TIR

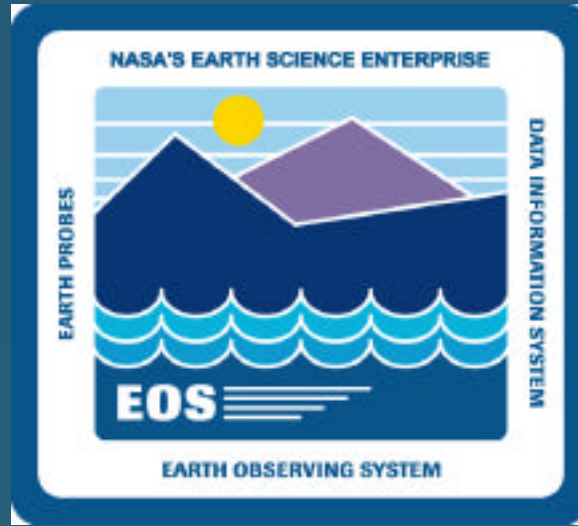
---

### Identify Inputs

This order will be processed using attached DPR

DAR ID	Expiration Date
<input type="text" value="1234589"/>	<input type="text" value="Feb 29, 2004"/>

68



# VO Gateway Enhancements

Guy Swope

# Requirements Summary



- **Searches for Non-Science Collections**
  - The Version 0 to ECS Gateway shall accept new search parameters in an inventory search request from the EOS Data Gateway (EDG) for collections that are non-science, or have no spatial or temporal information
- **Inventory Search Result Set Attributes**
  - The V0 to ECS GTWAY shall accept inventory search request that specifies whether a default set or all metadata attributes will be returned in the results
  - The V0 to ECS GTWAY shall accept a client specified set of attributes to be returned in an inventory search result

# Key Design Drivers



- **Usability of EOS Data Gateway (EDG) interface**
  - **Usability of V0/ECS interface key**
    - **Flags allowing users to specify if they want their search to include non-science, non-temporal or non-spatial granules**
    - **Default attribute set designation flag**
    - **Attribute list selection**
- **No new interfaces introduced**
  - **Existing interfaces between V0 and ECS will be enhanced**

# New SW Components

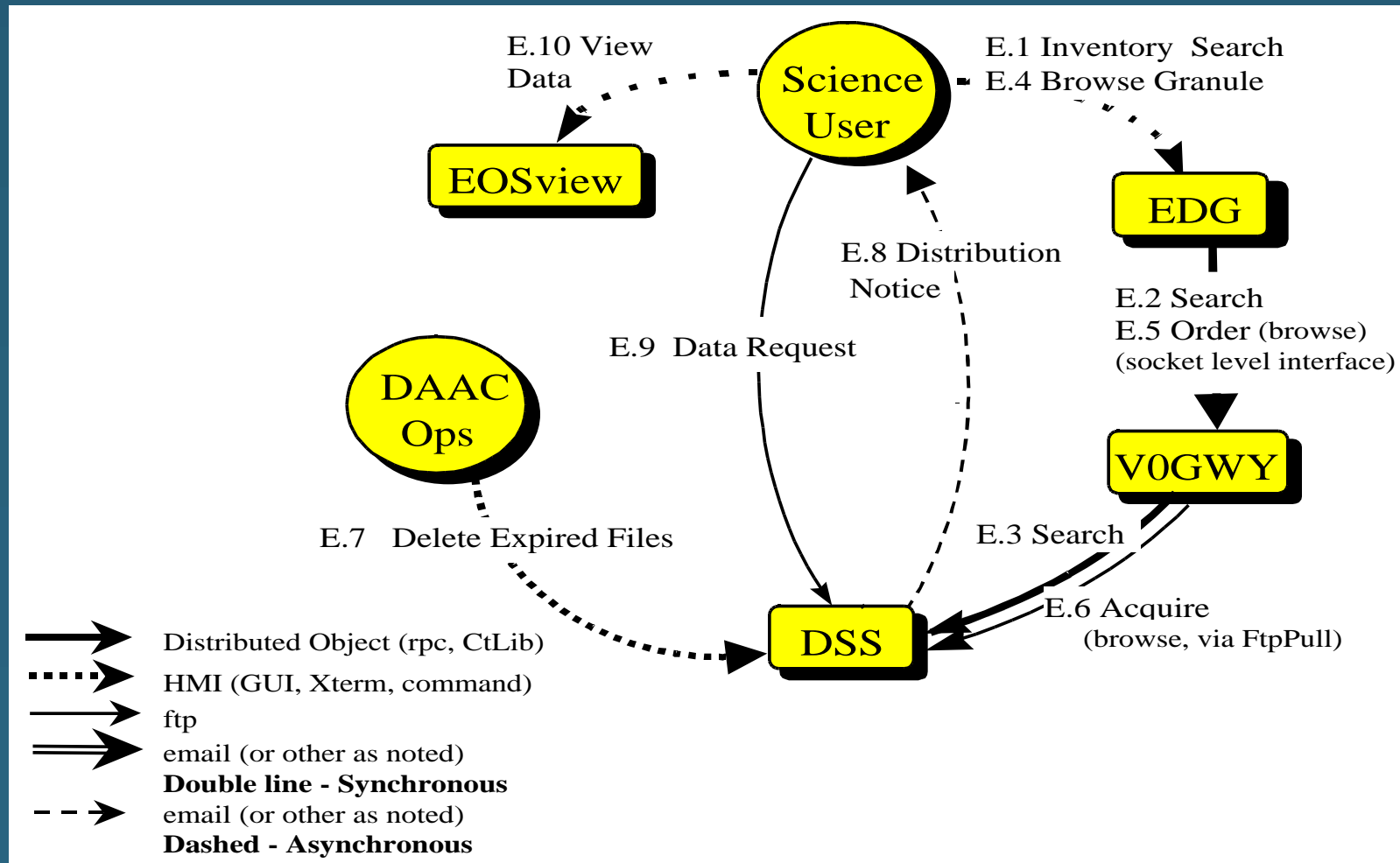


- There are no new SW Components associated with this capability.
- Modifications to existing software:
  - Version 0 Gateway (V0 GTWAY)





# Interaction Diagram



# End User Interaction

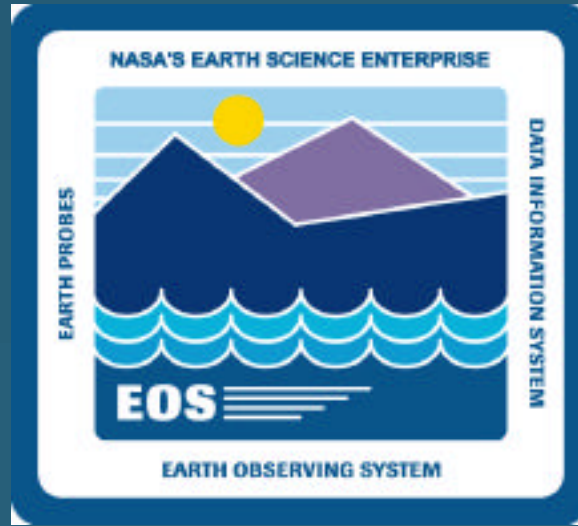


- Users from the EDG client will be able to:
  - Submit queries for “non-science” collections
    - Non science collections are typically missing common EDG search parameters including
      - SOURCE SENSOR PARAMETER CAMPAIGN
      - PROCESSING\_LEVEL
      - Temporal and spatial information
    - Users will now be able to specify parameters that include granules that have no spatial or temporal information
    - Select the granule-level attribute set of interest for their inventory search requests

# DAAC Operational Impacts



- **Two new configuration files need to be maintained**
  - **Default set of attributes**
    - Originally created by ESDIS with inputs from Its/DAACs
    - Installed and used by both EDG and V0-ECS Gateway when a user selects “default” set of attributes
    - May need to be updated when ECS core or Product Specific (PSA) attributes are added/updated/deleted from ECS data model
  - **EDG attribute selection list**
    - Initially created by ECS
    - Installed and used by the EDG to display attribute selection list to end user
    - Needs to be updated when ECS core or Product Specific (PSA) attributes are added/updated/deleted from ECS data model



# Archive Improvements

Don Brown

# Requirements Summary



- Allow re-routing of new data between archive instances
- Maintain mapping of data to earlier archive locations
- Increase logging of staging and archive activity
- Provide information on the progress of a file copy
- Accept request for service even if required server is down

# Key Design Drivers



- **Maintain current client interfaces**
- **Centralize configuration of physical to logical location**
- **Allow flexibility in mapping ESDTs to archive locations**
- **Make more efficient use of AMASS I/O scheduling**
- **Gain better control of file copying**
- **Make use of the STMGT Request Manager Architecture**
- **Prevent deadlocking of requests trying to utilize cache resources**
- **Use POSIX threads on the SGI rather than DCE threads**

# New SW Components



- **One new CI - STMGT Request Manager**
  - STMGT Request Manager processes
  - One Monitor process for each Archive Instance
  - One Monitor process for each Cache Manager

# New HW Components

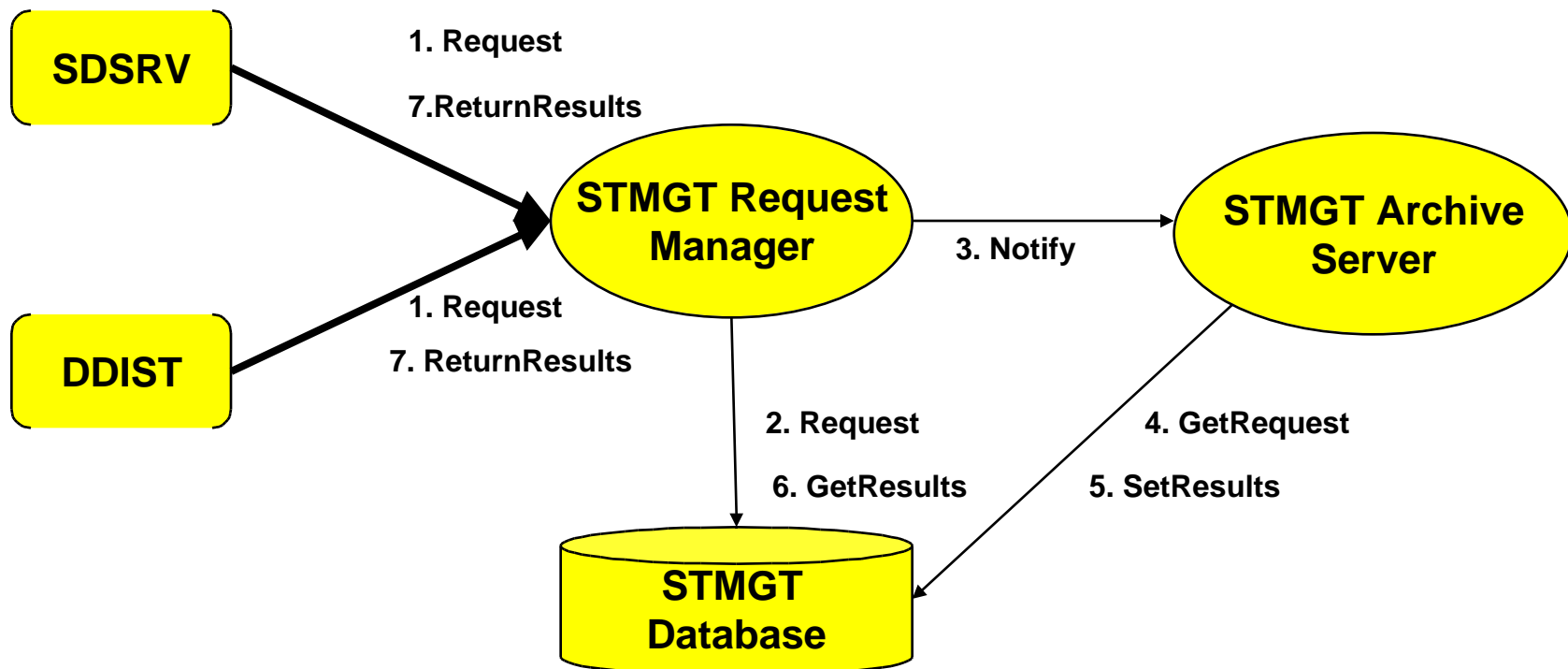


- Need for new hardware to be evaluated during design phase



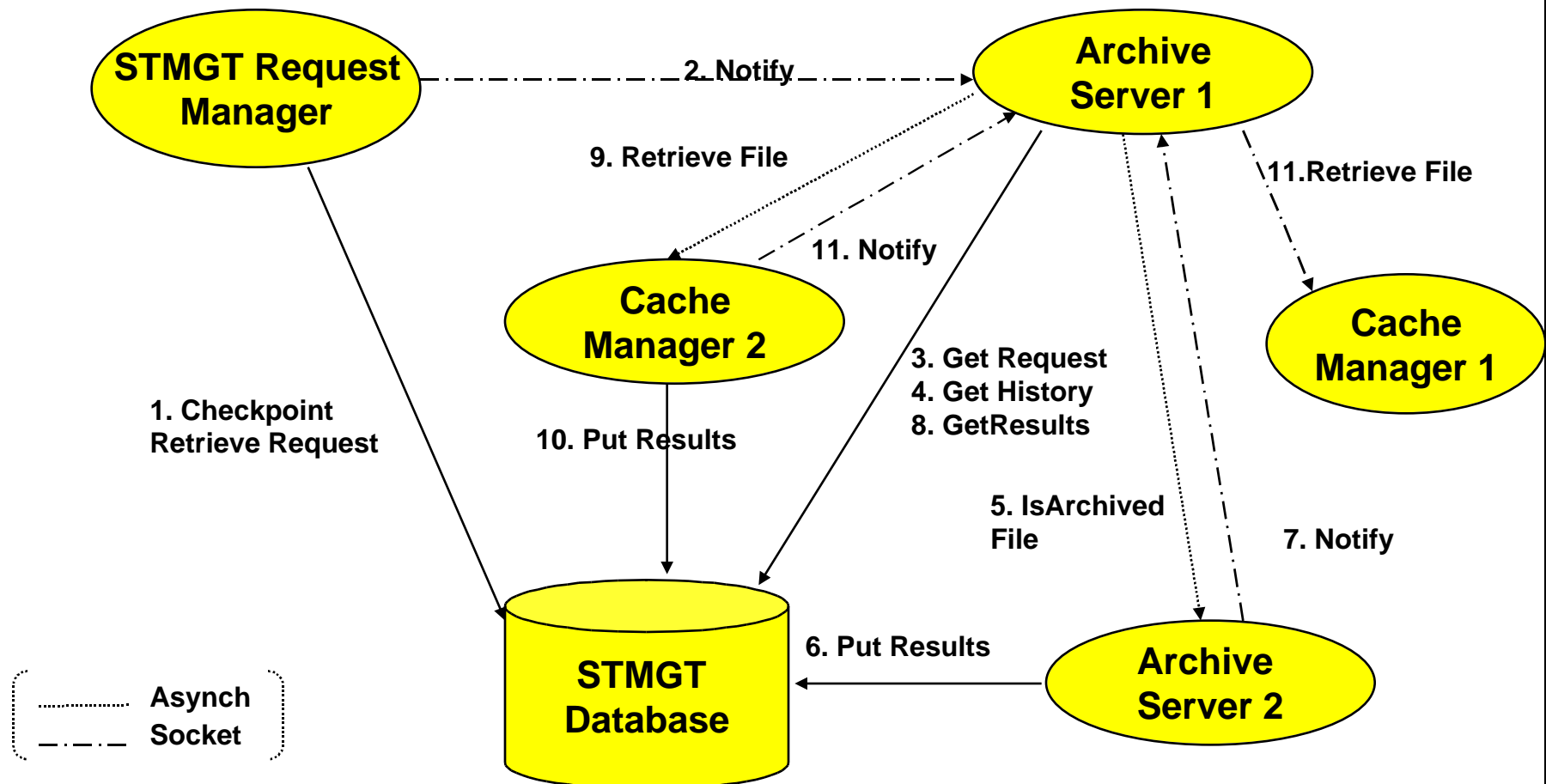


# Interaction Diagram Request for Archive Services





# Interaction Diagram



# End User Interaction



SDSRV  
Install  
ESDT  
GUI

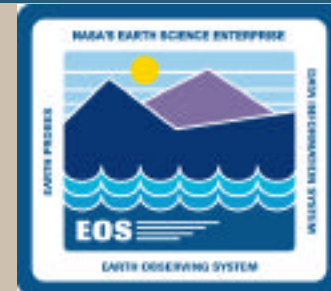
Add Data Type

Descriptor  
Filename: DsESDTAsAST\_L1BT.001 File...

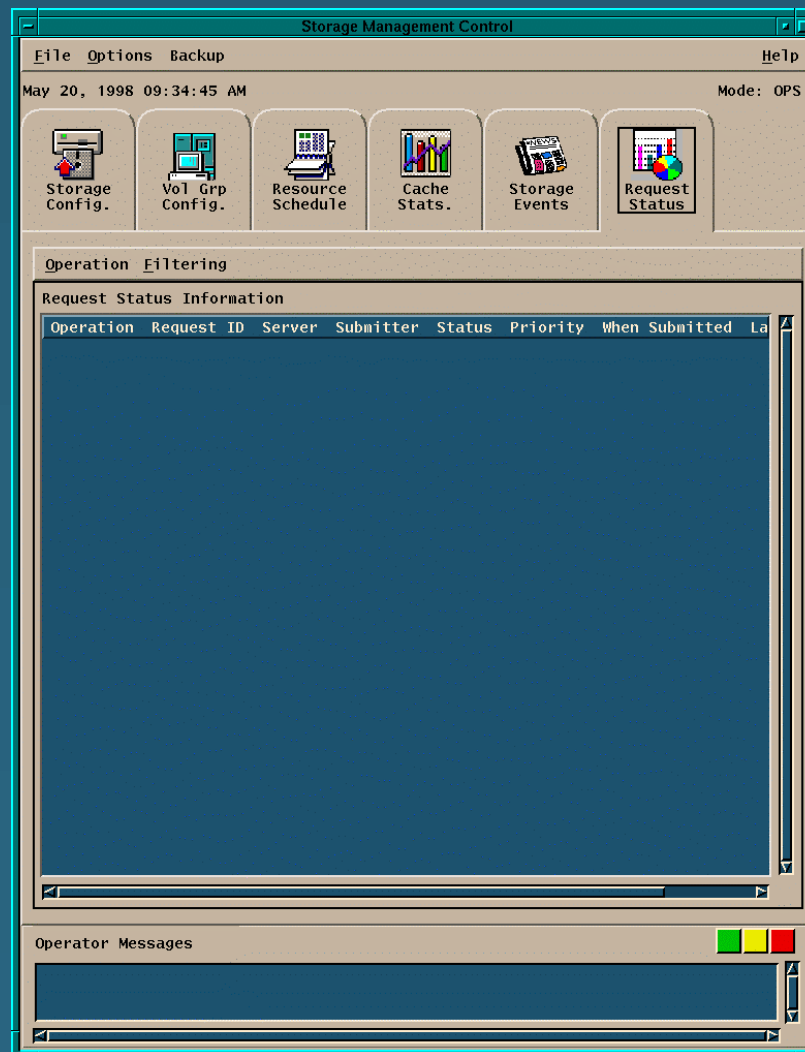
OK Cancel Clear Help

DID 609 4.10.1-4

# End User Interaction

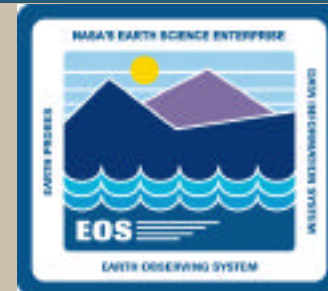


## STMGT Request Status



DID 609 4.10.2-24

# End User Interaction



## Volume Group Configuration Tab

Storage Management Control

File Options Backup Help

May 20, 1998 09:34:45 AM Mode: OPS

Storage Config. Vol Grp Config. Resource Schedule Cache Stats. Storage Events Request Status

Volume Group Information

Data Type	Current	Current Volume
Name	Hardware CI	Group Path

Find Next

Add... Modify Display History Reset

Volume Group History

Hardware CI	Path	Start	End
History	History	Date	Date

Operator Messages

DID-609 4.10.2.2.2

# End User Interaction



## Add Volume Group Pop-up

**Add Volume Group**

Data Type.Version:

Hardware CI:

Volume Group Path:

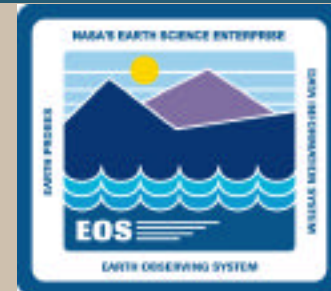
Volume Group Type:

☐ PRIMARY ☐ BACKUP ☐ OFFSITE

OK Cancel

DID 609 4.10.2-9

# End User Interaction



## Modify Existing Volume Groups

Selected Volume Group Information

Data Type	Current Hardware	Current Volume Group Path

Find

New ESDT Version:

New Hardware CI:

New Path:

OK Cancel

DID 609 4.10.2-10

# DAAC Operational Impacts



- **HWCI no longer input to SDSRV Install ESDT GUI**
- **Configure Number of Read and Write Threads for each Archive Instance**
  - Read and write threads used for Parallel AMASS I/O
- **Configuration of volume groups requires both path name and server identifier**